# Table of Contents

**1. Introduction ..... 4**
1.1. Minimum System Requirements ..... 5
1.2. Box Content ..... 6
1.3. Views of the Drive ..... 7
1.4. Hard Drive Heat Management ..... 9
1.5. Cables and Connectors ..... 10
1.5.1. USB 2.0 ..... 10
1.5.2. FireWire ..... 10
1.5.3. eSATA ..... 11

**2. Setting Up Your LaCie 2big ..... 12**
2.1. Connect the Interface Cable ..... 13
2.2. Turn On the 2big ..... 14

**3. RAID ..... 15**
3.1. About RAID Modes ..... 15
3.1.1. RAID 0 ..... 15
3.1.2. Concatenation ..... 16
3.1.3. Safe (RAID 1) ..... 16
3.1.4. Mixed (RAID 1 and RAID 0) ..... 17
3.2. Changing the RAID Mode ..... 18
3.3. Removing and Installing Drives ..... 19
3.4. Formatting and Partitioning ..... 20
3.4.1. File System Formats ..... 20
3.4.2. Windows Users ..... 22
3.4.3. Mac Users ..... 24

**4. Troubleshooting ..... 25**
4.1. LED Status Indicators ..... 26
4.2. Other Troubleshooting Topics ..... 27
4.3. Installing New Firmware ..... 27

**5. Contacting Customer Support ..... 28**
5.1. LaCie Technical Support Contacts ..... 29

**6. Warranty Information ..... 30**

## Copyrights

Copyright © 2009 LaCie. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written consent of LaCie.

## Trademarks

Apple, Mac, and Macintosh are registered trademarks of Apple Inc. Microsoft, Windows 98, Windows 98 SE, Windows 2000, Windows Millennium Edition, Windows XP, Windows Vista, and Windows 7 are registered trademarks of Microsoft Corporation. Other trademarks mentioned in this manual are the property of their respective owners.

## Changes

The material in this document is for information only and subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, LaCie assumes no liability resulting from errors or omissions in this document, or from the use of the information contained herein. LaCie reserves the right to make changes or revisions in the product design or the product manual without reservation and without obligation to notify any person of such revisions and changes.

## Canada Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## Japan Compliance Statement

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

## FCC Statement

LaCie 2big Quadra Enterprise Class
Tested to comply with FCC standards for home or office use

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

- The devices may not cause harmful interference
- The devices must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications to this product not authorized by LaCie could void the FCC & Industry Canada regulations and negate your authority to operate the product.

## Manufacturer's Declaration for CE Certification

We, LaCie, solemnly declare that this product conforms to the following European standards: Class B EN60950, EN55022, EN55024, EN61000-3-2: 2000, EN61000-3-3: 2001

With reference to the following conditions: 73/23/EEC Low Voltage Directive; 89/336/EEC EMC Directive

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designed collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service, or the shop where you purchased the product.

**CAUTION:** Modifications not authorized by the manufacturer may void the user's authority to operate this device.

**CAUTION:** A shielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.

## Health and Safety Precautions

- Only qualified persons are authorized to carry out maintenance on this device.
- Read this User Manual carefully and follow the correct procedure when setting up the device.
- Do not open a disk drive or attempt to disassemble or modify it. Never insert any metallic object into the drive to avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions. The disk drives shipped with your LaCie 2big contain no user-serviceable parts. If it appears to be malfunctioning, have it inspected by a qualified LaCie Technical Support representative.
- Never expose your device to rain, or use it near water, or in damp or wet conditions. Never place objects containing liquids on the LaCie 2big, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.
- Make sure that the computer and LaCie 2big are electrically grounded. If the devices are not grounded, there is an increased risk of electrical shock.

## General Use Precautions

- Power requirements 100-240 V~, 1.44 A, 50-60 Hz, (supply voltage fluctuations not exceeding ± 10% of the nominal and transient over-voltages according to over-voltage category II).
- Do not expose the LaCie 2big to temperatures outside the range of 5° C to 35° C (41° F to 95° F); or to operational humidity beyond 5-80%, non-condensing, or non-operating humidity beyond 10-90%, non-condensing. Doing so may damage the LaCie 2big or disfigure its casing. Avoid placing your LaCie 2big near a source of heat or exposing it to sunlight (even through a window). Inversely, placing your LaCie 2big in an environment that is too cold may damage the unit.
- Rated cooling for altitudes up to 2000 meters.
- Always unplug the LaCie 2big from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- Use only the power supply shipped with the device.
- Do not use the LaCie 2big near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.
- Do not place the LaCie 2big near sources of magnetic interference, such as computer displays, televisions or speakers.
- Magnetic interference can affect the operation and stability of your LaCie 2big.
- Never use excessive force on your LaCie 2big. If you detect a problem, consult the Troubleshooting section in this manual.
- Protect your LaCie 2big from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Never use benzene, paint thinners, detergent or other chemical products to clean the outside of the LaCie 2big. Such products will disfigure and discolor the casing. Instead, use a soft, dry cloth to wipe the device.
- Please replace defective hard drives only with a new drive provided by LaCie. For drive removal process, see section *3.3. Removing and Installing Drives*.

**IMPORTANT INFO:** Any loss, corruption or destruction of data while using a LaCie drive is the sole responsibility of the user, and under no circumstances will LaCie be held liable for the recovery or restoration of this data. To help prevent the loss of your data, LaCie highly recommends that you keep TWO copies of your data; one copy on your external hard disk, for instance, and a second copy either on your internal hard disk, another external hard disk or some other form of removable storage media. If you would like more information on backup, please refer to our website.

**IMPORTANT INFO:** 1TB (Terabyte) = 1,000GB. 1GB = 1000MB. 1MB = 1,000,000 Bytes. Total accessible capacity varies depending upon operating environment (typically up to 10% less per TB). Capacity and cache memory vary depending upon RAID mode.

# 1. Introduction

The LaCie 2big Quadra Enterprise class is a highly flexible two-disk RAID subsystem ideally suited for integration with databases, imaging systems and e-mail and Web servers. Its convenient 128-bit AES hardware encryption, easily configured using the LaCie Desktop Manager, makes the 2big a secure vault for your data.

Register your Enterprise Class product at www.lacie.com within 30 days of its purchase date to take advantage of LaCie Enterprise Class Service. For no additional cost, LaCie guarantees that your Enterprise Class product will receive the highest priority from our Technical Support team. Please note that the term of your warranty remains five years.

## Quick Links

Click a topic:


- Setting Up Your LaCie 2big
- Changing the RAID mode
- Troubleshooting

## 1.1. Minimum System Requirements

| Operating System | Interface Port | Disk Space |
|---|---|---|
| The latest versions of Microsoft Windows XP*, Windows Vista, or Windows 7 | eSATA**, FireWire 400, FireWire 800, and/or USB 2.0 | Minimum of 600MB recommended |
| The latest versions of Apple OS 10.4.x, 10.5.x, or 10.6.x | eSATA**, FireWire 400, FireWire 800, and/or USB 2.0 | Minimum of 600MB recommended |

* Windows XP will not recognize logical volumes with capacity greater than 2TB. For details, see section *3.4.1. File System Formats*.

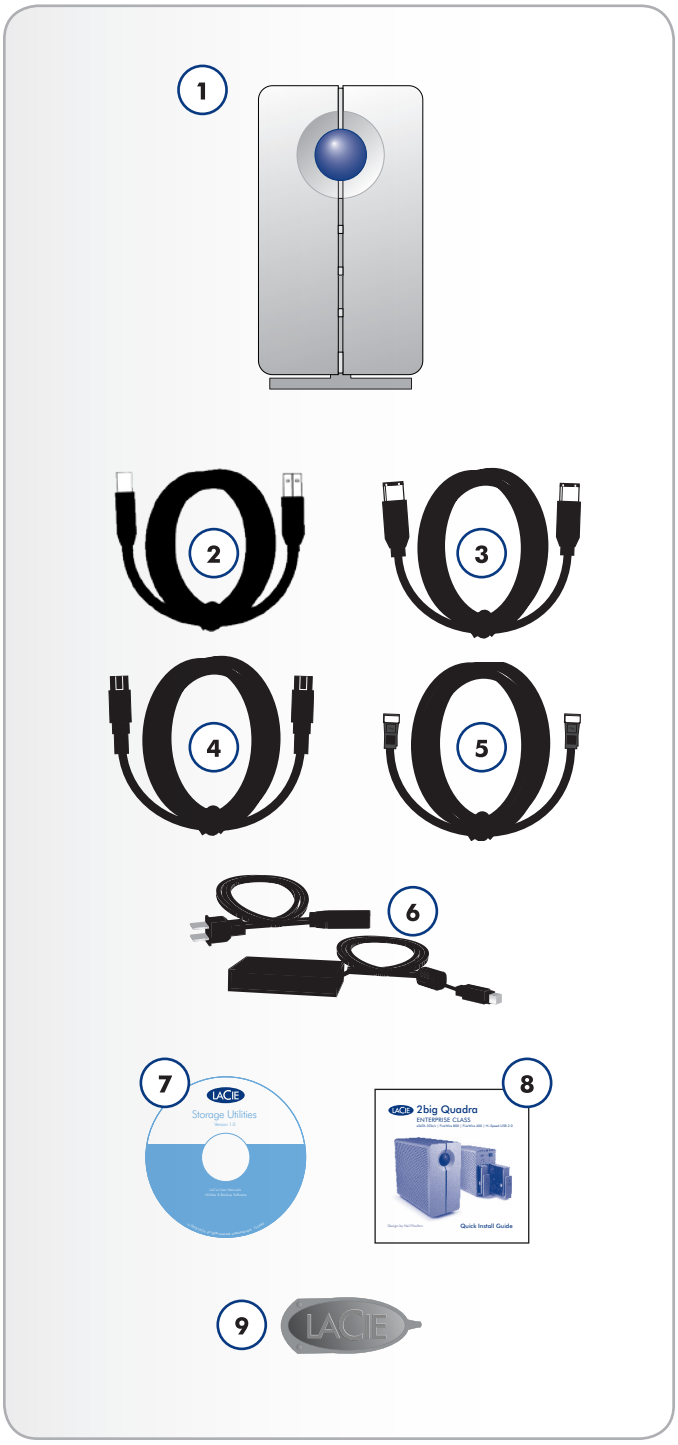
**Most computers do not come from the factory with eSATA ports, so you may need to purchase a connection card (such as PCI or PCI-E) to be able to connect your LaCie 2big via the eSATA interface. LaCie offers a wide selection of connection cards. Visit the LaCie website at www.lacie.com/accessories.

## 1.2. Box Content

Your LaCie 2big package contains the system tower and an accessories box containing the items listed below.

1. LaCie 2big RAID system tower with two hot-swappable Enterprise-Class hard drives
2. Hi-Speed USB 2.0 cable
3. FireWire 400 cable
4. FireWire 800 cable
5. eSATA cable
6. External power supply
7. LaCie Utilities CD-ROM
8. Quick Install Guide
9. 2-in-1 RAID mode change and drive removal tool

**IMPORTANT INFO:** Please save your packaging. In the event that the drive should need to be repaired or serviced, it must be returned in its original packaging.



## 1.3. Views of the Drive

### Front View

The blue button on the front of the LaCie 2big serves as a LED drive status indicator and the LaCie Shortcut Button.

See the LaCie Desktop Manager User Manual on the CD-ROM for more information.

See troubleshooting section *4.1. LED Status Indicators* for more information.

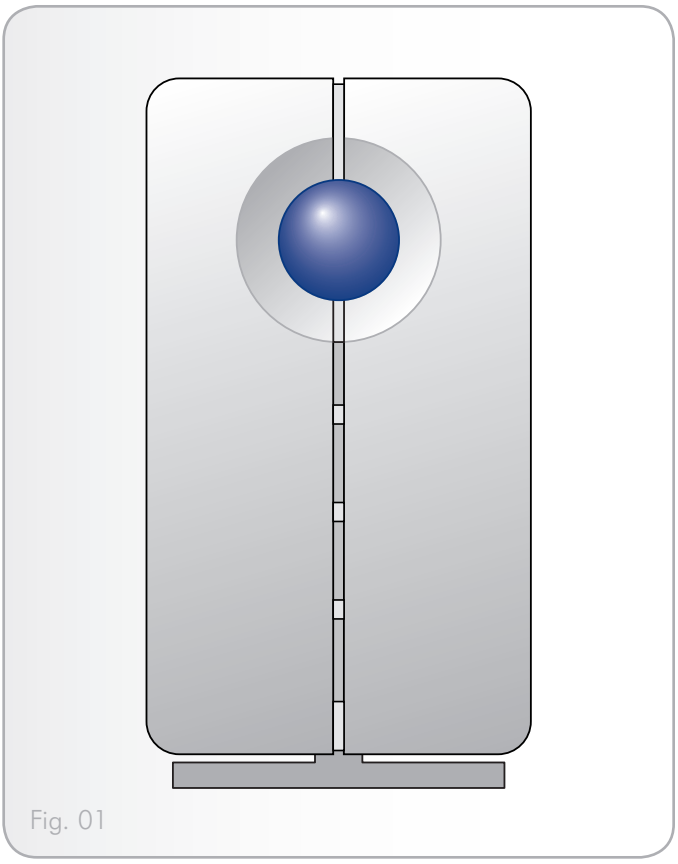
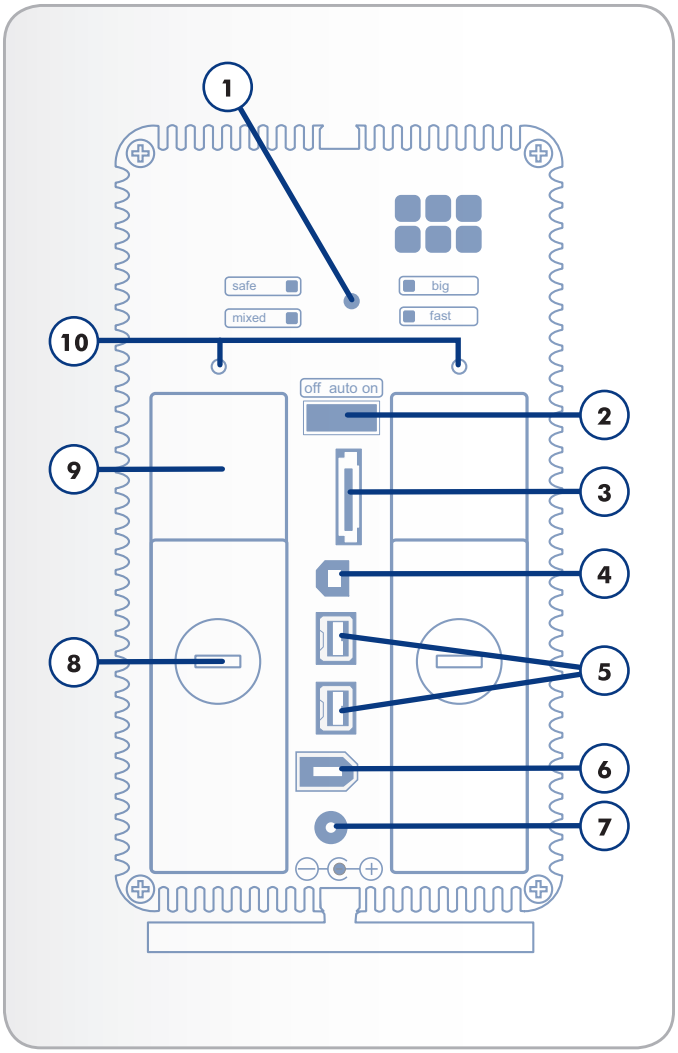


Fig. 01

## Rear View

1. RAID selection switch
2. on/auto/off power switch
3. eSATA 3Gb/s port
4. Hi-Speed USB 2.0 port
5. FireWire 800 ports
6. FireWire 400 port
7. Power input connection
8. Drive lock
9. Drive tray handle
10. Drive status LED




**CAUTION:** To avoid overheating, the LaCie 2big should be installed in a well-ventilated area and in such a way as to maintain sufficient airflow across the controller chips. Also ensure that the Ventilation Fan is not obstructed.

Environmental Requirements:

Temperature: 0 – 35° C (32 – 95° F)

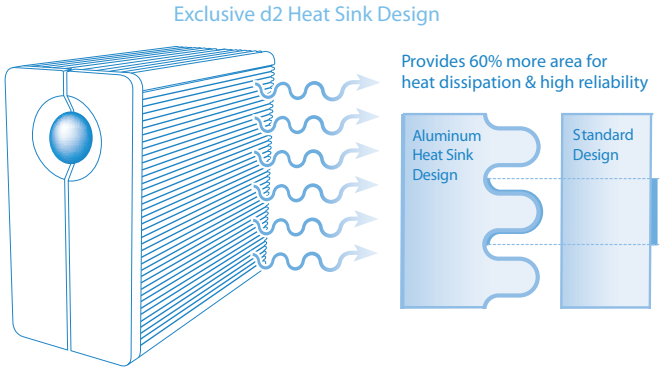
Operation Humidity: 20 – 80%, non-condensing

Storage Humidity: 10 – 90%, non-condensing

# 1.4. Hard Drive Heat Management

## Heat Dissipation Design

The LaCie 2big's metal body is ideal for naturally dissipating internal drive heat. Its unique design actually draws heat away from the internal drives toward the external casing. This feature takes heat away from the internal drive, keeping it safe and prolonging its life and reliability. **As a consequence, it is normal for the external casing to be hot to** the touch. Please make sure that the vents on the back bezel are not obstructed so that there is a natural airflow across the casing.


Exclusive d2 Heat Sink Design
Provides 60% more area for heat dissipation & high reliability
Aluminum Heat Sink Design
Standard Design

## Vertical, Horizontal & Rackmount

Heat dissipation is maximized when the drive is in the vertical position. If you have several LaCie drives stacked on each other, please remember to attach the included rubber feet on the under side of your drives. This will allow for some airflow between your drives so that the heat dissipation can work effectively. LaCie does not recommend stacking or racking more than 3 drives on top of each other, especially if these drives are turned ON simultaneously.

## Smart Fan Technology

The casing alone is a great way to dissipate heat without the need of a fan, but the 2big comes with a thermo-regulated "smart fan", which activates when the heat inside the casing reaches a certain temperature. The smart fan operates at two different speeds, and adjusts automatically to changes in temperature.

# 1.5. Cables and Connectors

## 1.5.1. USB 2.0

USB is a serial input/output technology for connecting peripheral devices to a computer or to each other. Hi-Speed USB 2.0 is the latest implementation of this standard, and it provides the necessary bandwidth and data transfer rates to support high speed devices such as hard drives, CD/DVD drives and digital cameras.

### Included USB Cable

Your LaCie drive is shipped with a Hi-Speed USB 2.0 cable, to ensure maximum data transfer performance when connected to a Hi-Speed USB 2.0 port. The cable will also work when connected to a USB port, but drive performance will be limited to USB 1.1 transfer rates.

### Hi-Speed USB 2.0 Benefits

- Backwards compatibility: Hi-Speed USB 2.0 works with the original USB specifications.
- Hot-swappable: no need to shut down or restart your computer when adding or removing devices.

Fig. 02 – USB Cable Ends

## 1.5.2. FireWire

FireWire 400, also known as IEEE 1394, is a high-speed serial input/output technology for connecting peripheral devices to a computer or to each other, and FireWire 800 is the implementation of the new IEEE 1394b standard.

FireWire 800 offers increased bandwidth and extended cabling distance between devices. FireWire 800 is ideal for bandwidth-intensive applications, such as audio, video and graphics.

### Included FireWire Cables

Your LaCie hard disk is shipped with a FireWire 400 cable and a FireWire 800 cable.

### FireWire Benefits

- Hot-pluggable: devices can be added and removed while the bus is active.
- Isochronous data delivery: no dropped frames – FireWire supports real-time data delivery.
- Flexible: up to 63 devices can be connected on a single bus.

Fig. 03 – FireWire 400 Cable Ends

Fig. 04 – FireWire 800 Cable Ends

## 1.5.3. eSATA

Your LaCie 2big Quadra uses the latest in SATA technology, allowing interface (or bus) transfer rates of up to 3 Gb/s. SATA technology was originally developed to serve as an internal interface, delivering improved performance to internal connections. Soon after, eSATA, or external SATA was developed, allowing for the use of shielded cables outside the PC.

eSATA technology was developed to be rugged and durable. eSATA connectors do not have the "L" shaped design of other SATA connectors. In addition, the guide features are vertically offset and reduced in size to prevent the use of unshielded internal cables in external applications.

### Included eSATA Cable

Your LaCie drive is shipped with an eSATA cable, to ensure maximum data transfer performance when connected to a eSATA port.

### eSATA Benefits

- eSATA interface can achieve up to 3 Gb/s transfer rate.
- Plug orientation – An extrusion on the outside of the connector helps guide and align the connector during insertion.
- Hot-plug support – eSATA enables adding and removing a drive without having to power down the system or reboot.

Fig. 05 – eSATA Cable Ends

# 2. Setting Up Your LaCie 2big

This section covers the installation and configuration of your LaCie 2big Enterprise Class. Follow the steps below to power on and configure your LaCie 2big:

**Step 1** – Connect the Interface Cable (section *2.1*)

**Step 2** – Turn On the 2big (section *2.2*)

**Step 3** – Configuring RAID (section *3*)

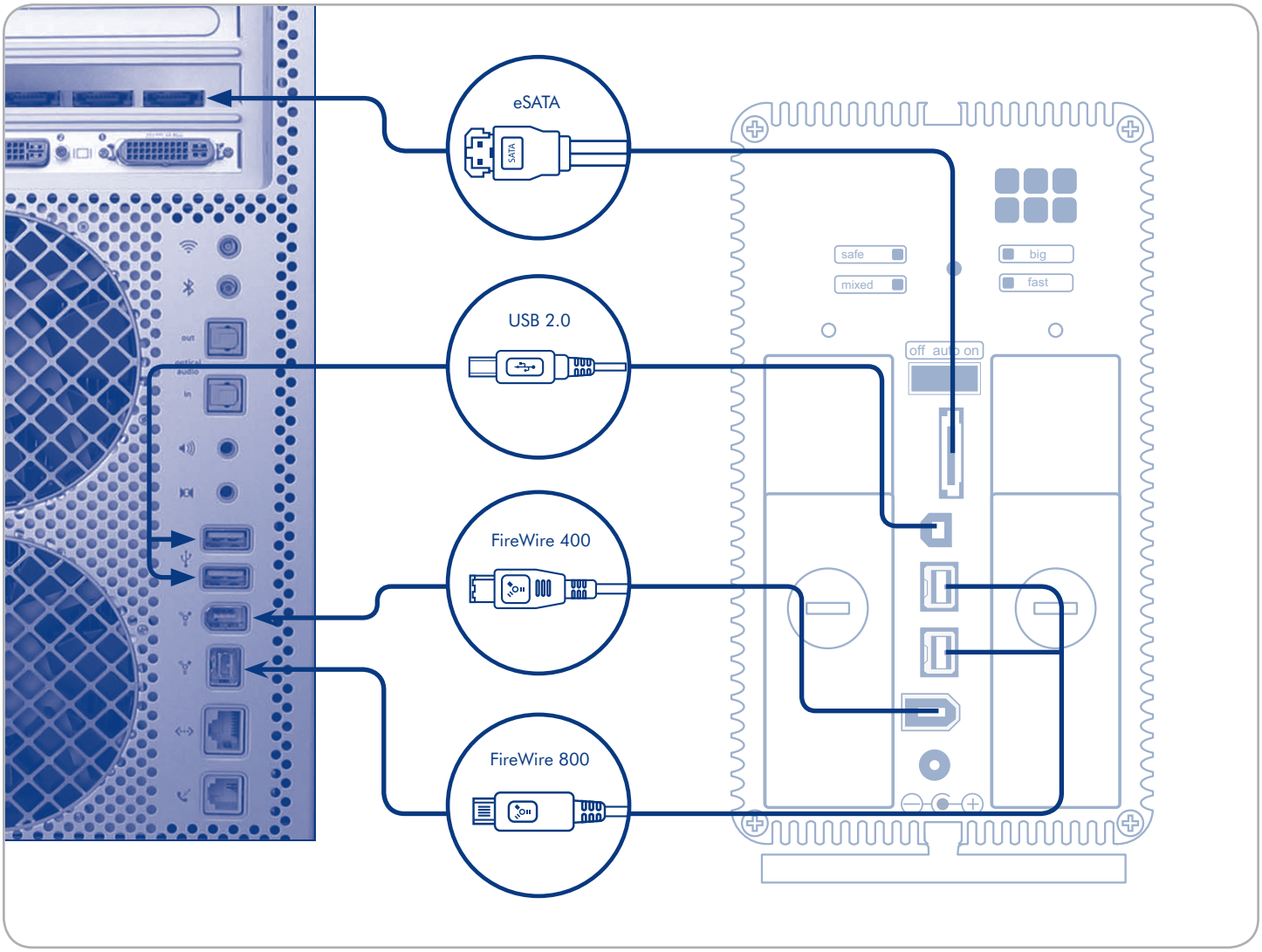
**TECHNICAL NOTE:** The LaCie 2big Quadra Enterprise Class comes with no encryption configured. If you want to set up encryption, install the LaCie Desktop Manager and refer that application's user manual.

**IMPORTANT INFO:** LaCie Enterprise Class encryption offers a very high level of protection for your most important data. Due to the strength of the encryption, data recovery will not be possible in the unlikely event of disk or part failure.

## 2.1. Connect the Interface Cable

1. Plug one end of the interface cable (USB, FireWire or eSATA) into the corresponding port on your host computer.
2. Connect the other end of the cable to the matching port on the 2big.

**TECHNICAL NOTE:** If two interfaces are connected at the same time, the first one connected remains active and the second will not work.



## 2.2. Turn On the 2big

The power supply kit is composed of two cables: one cable (**A**) connects to the LaCie drive; and the other cable (**B**) connects to a power outlet, such as a wall outlet or a surge protector (*Fig. 06*).

1. Connect cable **A** to the 2big.
2. Connect cable **B** to the power supply brick (**C**).
3. Connect cable **B** to a surge protector or wall outlet.
4. Turn on the drive by moving the power switch on the back of the drive to the "on" position.

The 2big system may take up to 30 seconds to boot up.

**CAUTION:** Only use the AC adapter supplied with your specific LaCie device. Do not use a power supply from another LaCie device or another manufacturer. Using any other power cable or power supply may cause damage to the device and void your warranty.

Always remove the AC adapter before transporting your LaCie drive. Failure to remove the adapter may result in damage to your drive and will void your warranty.

**TECHNICAL NOTE:** You may use your LaCie drive when in a foreign country thanks to its 100-240 Volt power supply. To be able to use this feature, you may need to purchase an appropriate adapter or cord. LaCie accepts no responsibility for any damage to the drive resulting from the use of an inappropriate adapter. Using an adapter other than one authorized by LaCie will void your warranty.

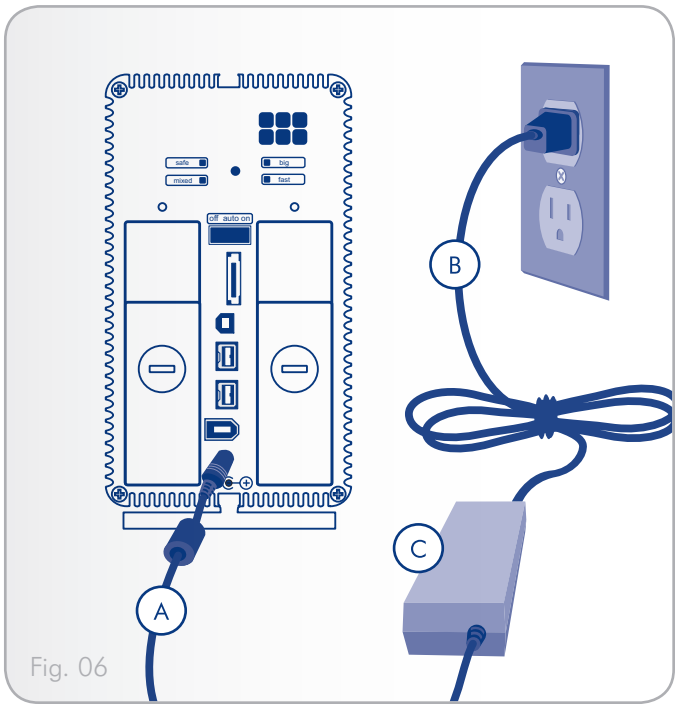


Fig. 06

**NOTE:** Depending on your country, power outlet connections may be different from the one shown above.

# 3. RAID

## 3.1. About RAID Modes

This section will help you decide which RAID mode is right for your application.

| RAID Mode | Capacity | Protection | Speed |
|---|---|---|---|
| Fast (RAID 0) | 100% | ★☆☆☆☆ | ★★★★★ |
| Big (Concatenation) | 100% | ★☆☆☆☆ | ★★☆☆☆ |
| Safe (RAID 1) | 50% | ★★★★★ | ★★☆☆☆ |
| Mixed (RAID 0 and RAID 1) | 75% | ★★★★☆ | ★★★☆☆ |

### 3.1.1. RAID 0

The 2big Quadra Enterprise class is pre-configured in RAID 0, the fastest RAID mode. Requiring at least 2 drives, RAID 0 stripes data onto each disk (*Fig. 07*). The available capacities of each disk are added together so that one logical volume mounts on the computer.

If one physical disk in the array fails, the data of all disks becomes inaccessible because parts of the data have been written to all disks.

**Applications**

RAID 0 is ideal for users who need maximum speed and capacity. Video editors working with very large files may use RAID 0 when editing multiple streams of video for optimal playback performance. A RAID 0 array is more suited for actively working with files (editing video, for example) and should not be used as a storage backup.

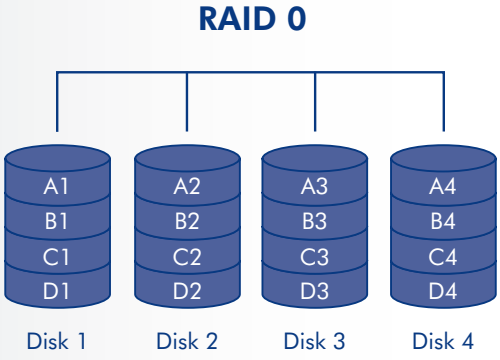



Fig. 07

**IMPORTANT INFO:** Data recovery is not possible when using RAID 0.

### 3.1.2. Concatenation

When disks are concatenated, their capacities are combined and data is written to the primary disk in the array until is it full, and then to successive disks (*Fig. 08*). Concatenation provides no performance advantage or added measure of data safety. It is simply a method of combining more than one physical disk into one volume for greater overall capacity.

Concatenation allows full use of the capacity of all disks in the array and most data can survive a disk failure. Only data on the failed disk and data that is partially written on the failed disk and an operative disk is lost.

Offers the maximum possible capacity by combining the capacities of several drives into one large volume.

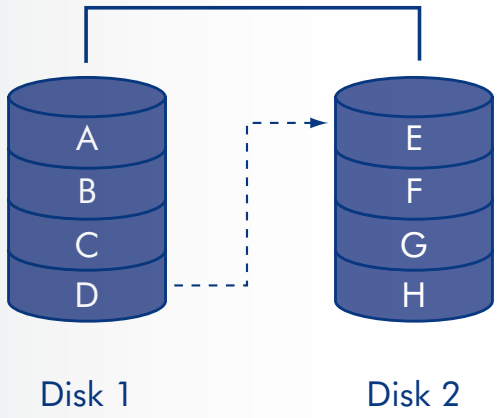



Fig. 08

### 3.1.3. Safe (RAID 1)

In Safe mode (RAID 1), the two physical disks are mirrored together so that one single logical volume mounts on the desktop (*Fig. 09*).

All data is saved simultaneously on each disk (the available capacity cannot exceed the available capacity of the lowest-capacity single disk). If one physical disk fails, the data is available immediately on the second disk. No data is lost if one disk fails.

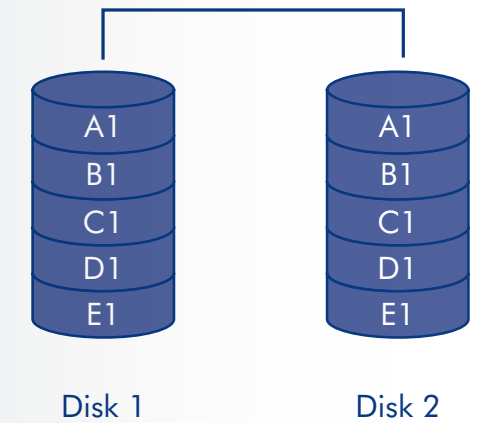



Fig. 09

**Applications**

- Maximum data safety
- Safe reduces the total available capacity by 50% because two copies of the data are saved.

### 3.1.4. Mixed (RAID 1 and RAID 0)

In Mixed mode, the two physical disks are combined so that two logical volumes mount simultaneously on the desktop (*Fig. 10*):

- One Safe volume (RAID 1) where data is automatically mirrored on each physical disk. This volume uses 50% of the available capacity of each disk (the available capacity cannot exceed 50% of the lowest-capacity single disk).

**IMPORTANT INFO:** If one physical disk fails, the data of the SAFE volume is available on the second disk. Only 25% of full capacity is protected by mirroring. In this case, data on the Fast (RAID 0) volume will be lost.

- One Fast volume (RAID 0) enables the user to work with the high speed of RAID 0.

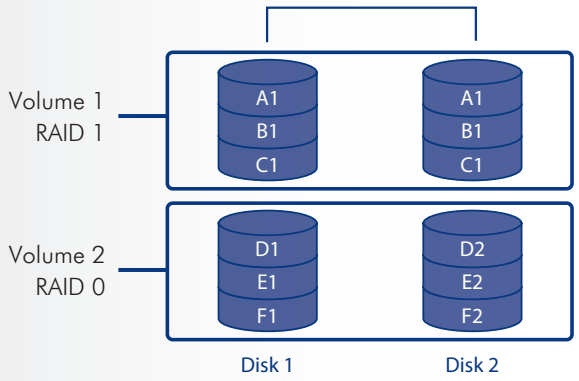



Fig. 10

#### Applications

- Provides two volumes for different data security needs.
- Only 75% of total formatted capacity is available due to mirroring on the Safe volume.

## 3.2. Changing the RAID Mode

Before you change the RAID mode of the LaCie 2big, familiarize yourself with the 2big's RAID modes. See section *3.1. About RAID Modes*.

### To change the RAID mode:

1. Unmount or safely remove the 2big Quadra volumes from your computer, disconnect the interface cable, and switch off the 2big.
2. To enter RAID modification mode, push and hold the front button and simultaneously turn on the 2big. The front LED will blink blue and red.
3. Use the 2-in-1 tool to push the RAID selection button until the light arrives in front the desired RAID mode. The LED of the selected mode will blink until you validate it (next step) (*Fig. 11*).
4. Validate the mode by pushing the front LED button. The 2big will start.
5. Connect the 2big's interface cable. The device is ready to be reformatted (see section *3.4. Formatting and Partitioning*).

**IMPORTANT INFO:** You must partition the disk drives after changing the storage policy configuration. See section *3.4. Formatting and Partitioning*.

**CAUTION:** Your LaCie 2big comes preconfigured in Fast (RAID 0) mode. Fast mode allows access to the whole storage capacity and enhanced transfer speeds. However, Fast mode does not provide data security in the event of disk failure. LaCie recommends Mixed mode in order to take advantage of RAID 0 performance with the option to back up all data on the RAID 1 partition. See section *3.1. About RAID Modes*, for more information.

**IMPORTANT INFO:** Changing the RAID mode or encryption configuration destroys data stored on the LaCie 2big. If you have saved data on the drives, back it up before following these steps.

**IMPORTANT NOTE:** If you have encrypted your 2big, changing the RAID mode will not change the encryption configuration (including login name and password) but will erase the encrypted data.

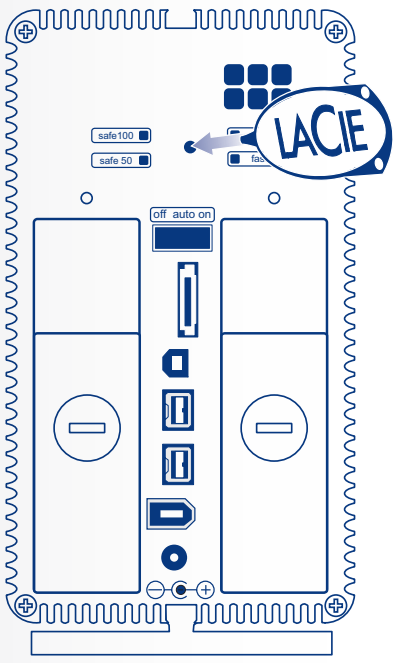



Fig. 11

## 3.3. Removing and Installing Drives

In the event that an individual hard disk fails in the LaCie 2big Enterprise Class, please contact your LaCie reseller or LaCie Customer Support. Please replace a defective hard drive only with a new drive provided by LaCie.

**CAUTION:** After continuous use of the LaCie 2big, drives may be hot. Use caution when removing.

### To Remove a Drive:

1. If the 2big is in Fast (RAID 0) or Big (concatenation) mode, turn it off and unplug it. If the 2big is in Safe (RAID 1) or Mixed mode, you can leave it turned on and continue to step 2.
2. The drive tray may be locked. To unlock it, insert the round end of the provided 2-in-1 tool into the slot on the drive lock and turn the lock until the slot is vertical (*Fig. 12*).
3. Draw out the drive tray by inserting your finger into the space behind the drive tray handle and pulling to disengage the drive.
4. Grasp the drive tray handle and carefully extract the drive (*Fig. 13*).
5. Turn the drive on to continue using the remaining drives.

### To Install a Drive:

**IMPORTANT INFO:** A replaced drive should not have a smaller capacity than the drive it is replacing.

1. If the 2big is in Fast (RAID 0) or Big (concatenation) mode, turn it off and unplug it. If the 2big is in Safe or Mixed mode, you can leave it turned on and continue to step 2.
2. Carefully insert the drive tray into an empty drive bay. When the drive tray is most of the way in and you feel resistance, press the drive tray handle firmly until you feel the drive snap into place and the drive tray handle is flush with the back of the 2big.
3. Use the 2-in-1 tool to lock the drive lock. Turn the locks until the grooves are oriented vertically. The drives are locked when all locks are horizontal.

**TECHNICAL NOTE:** Data are still accessible during a rebuild. In On and Auto mode, the 2big can be disconnected from the workstation during the rebuild. In Auto mode, if the 2big is not connected or if the computer is off, the 2big will go into standby mode when the rebuild has completed.

**IMPORTANT INFO:** Drive warranty will be void if you replace the defective drive with a drive not provided by LaCie. Drives purchased from LaCie are shipped pre-installed in drive trays with handles.

**IMPORTANT INFO:**

Rebuilding a Safe (RAID 1) array can take several hours. For example, rebuilding a 1TB RAID 1 array can take up to 6 hours.

LaCie does not recommend removing any drives during rebuild.

**IMPORTANT INFO:** In Safe (RAID 1) and Mixed (RAID 1 and RAID 0) mode, in order for rebuilding to occur, the product must be turned on while a replacement disk is installed. LaCie does not recommend removing a drive from a Mixed array unless the drive has failed, as the data on the RAID 0 volume could be lost.

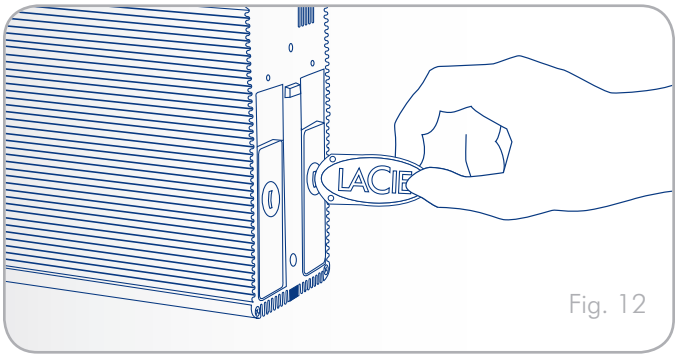


Fig. 12

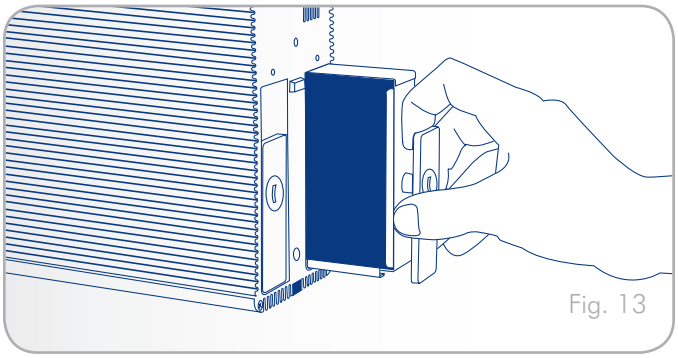


Fig. 13

## 3.4. Formatting and Partitioning

The 2big Quadra comes pre-formatted in HFS+ (optimized for Mac OS X). Please read the following information on file system formats for Windows and Mac operating systems to determine if you need to reformat the 2big's disks. See sections 3.4.2 and 3.4.3 for formatting instructions.

### 3.4.1. File System Formats

#### Windows Users

**TECHNICAL NOTE:** The LaCie 2big Quadra comes preformatted in HFS+ for optimum performance with Mac OS X.

**TECHNICAL NOTE:** Windows XP 32-bit does not support volumes greater than 2TB. Windows XP x64, Windows Vista (32- and 64-bit versions), and Windows 7 (32- and 64-bit versions) do, but in order to create volumes bigger than 2TB from these operating systems, you must convert the disk to GPT file system. This process is outlined in 3.4.2.

FAT 32: FAT is an acronym for File Allocation Table, which dates back to the beginnings of DOS programming. Originally, FAT was only 16 bits, but after the second release of Windows 95 it was upgraded to 32 bits, hence the name FAT 32. In theory, FAT 32 volume sizes can range from less than 1MB all the way to 2TB. It is the native file system of Windows 98 and Windows Me, and is supported by Windows 2000, Windows XP, Windows Vista, and Windows 7. When FAT 32 is used with Windows 2000, Windows XP and Windows Vista though, volume size is limited to 32GB (by the Windows partition utility, i.e. Disk Manager), and the individual file size is limited to 4GB.

NTFS: This acronym stands for New Technology Filing System, and it is the native file system for Windows NT, Windows 2000, Windows XP, Windows Vista, and Windows 7. NTFS offers several features that are not available with FAT 32; i.e. file compression, encryption, permissions, and auditing, as well as the ability to mirror drives and RAID 5 capabilities. The minimum supported volume size for NTFS is 10MB, with a maximum of 2TB when initialized in MBR format or without a limit when initialized in GPT format, with no limit to file size. Volumes created in NTFS can only be directly accessed (not through shares) by Windows NT, Windows 2000, Windows XP, Windows Vista, and Windows 7 without resorting to help from third-party products.

#### Windows File System Formats

There are two possible file system format categories for Windows users: NTFS and FAT 32 (MS-DOS). See the table below for more information.

**Use NTFS if:**

...you will be using the drive with Windows XP, Windows Vista, and/or Windows 7 only (performance will generally be greater when compared to FAT 32). This file system is compatible in read only mode with Mac OS 10.3 and higher.

**Use FAT32 if:**

...you will be using your drive with both Windows and Mac OS 9.x or 10.x or sharing the drive between Windows 2000, XP, and 98 SE. Maximum single file size is 4GB.

## Mac OS X Users

**TECHNICAL NOTE:** The LaCie 2big Quadra comes preformatted in HFS+ for optimum performance with Mac OS X.

You may customize the drive by reformatting and/or partitioning the drive with separate file system formats. For optimal performance in Mac OS environments, format and partition the drive as one large Mac OS Extended volume.

Mac OS Extended (HFS+): Mac OS Extended refers to the file system used by Mac OS X. HFS+ represents an optimization of the older HFS file system by using hard disk space more efficiently. With HFS+, you are no longer limited by block size.

MS-DOS File System (FAT 32): This is the Microsoft file system, more typically known as FAT 32. This is the file system to use if you are going to be using your LaCie Hard Drive between Macs and Windows operating systems.

## Mac File System Formats

There are two possible file system format categories for Mac users: Mac OS Extended (HFS+) and FAT 32 (MS-DOS). See the table below for more information.

### Use HFS+ if:

...you will be using the drive on Macs only; performance will generally be greater when compared to FAT 32. This file system is NOT compatible with Windows OS.

### Use FAT32 if:

...you will be using your drive with both Windows and Mac OS 9.x or 10.x . Maximum single file size is 4GB.

### 3.4.2. Windows Users

The process of formatting a drive on a computer running Windows XP, Windows Vista, or Windows 7 consists of two steps: (1) installing a signature on the drive, and (2) formatting the drive. These steps will erase anything that is on the disk.

**CAUTION:** Following these steps will erase everything from the 2big, including encrypted data. If you have information that you want to protect or continue to use, back up this information before performing these steps.

**IMPORTANT NOTE:** Formatting will not erase the encryption configuration. If you wish to format a 2big that has been encrypted, you will first need to unlock the device using the LaCie Desktop Manager, then follow the steps below.

**TECHNICAL NOTE:**

Windows XP 32-bit: These operating systems will not recognize volumes greater than 2TB in size.

Windows XP x64, Windows Vista (32- and 64-bit versions), and Windows 7 (32- and 64-bit versions): These operating systems will recognize volumes greater than 2TB in size, but the disks must be converted to the GPT file system before partitions greater than 2TB can be created.

1. Connect the drive to the power source and to the computer via the interface port.
2. Right-click **My Computer** and select **Manage**.
3. From the "Computer Management" window, select **Disk Management** (located below the Storage group). See *Fig. 14* (screens may differ slightly depending on the system).
4. If the "Initialize and Convert Disk Wizard" window appears, click **Cancel**.
5. Windows will list the Hard Disks that are installed on the system. Locate the drive that is represented by the icon. Right-click the icon and select **Initialize**.
6. Windows XP x64, Windows Vista, and Windows 7: Right-click the disk and click **Convert to GPT**.
7. In the box to the right that says Unallocated, right-click and select **New Partition...**
8. On the first page of the "New Partition Wizard," click **Next**. See *Fig. 15* (screens may differ slightly depending on the system).

continued on next page...

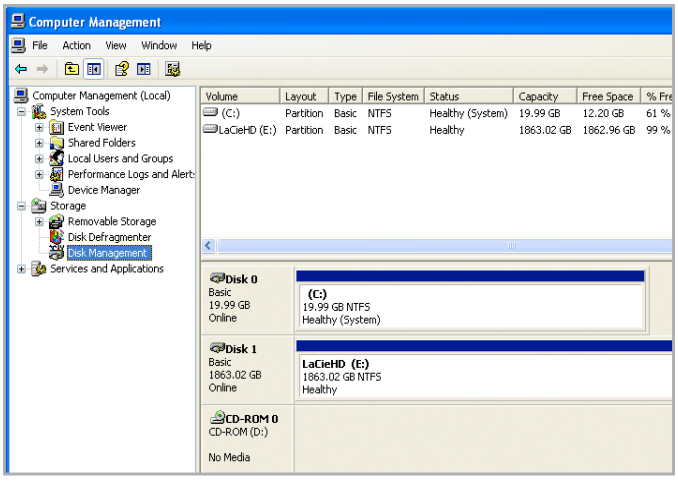



Fig. 14

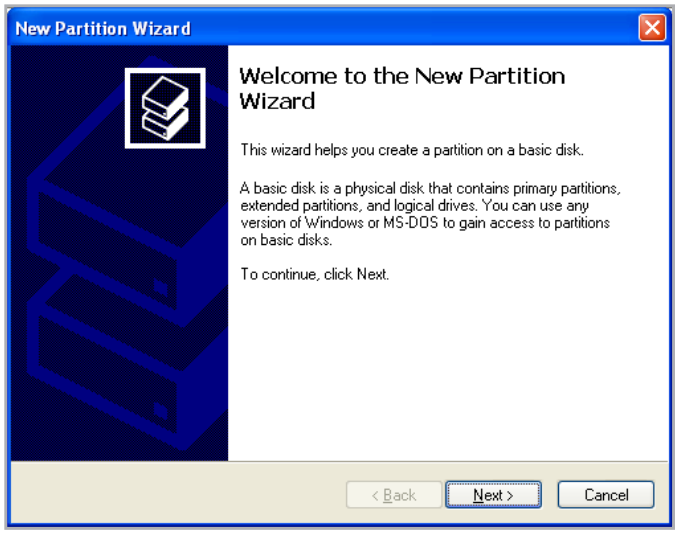

New Partition Wizard
Welcome to the New Partition Wizard
This wizard helps you create a partition on a basic disk.
A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. You can use any version of Windows or MS-DOS to gain access to partitions on basic disks.
To continue, click Next.
< Back
Next >
Cancel

Fig. 15

9. Click **Next**.
10. Click **Next**.
11. Click **Next**.
12. Click **Next**.
13. On the Format Partition window, select **Quick Format**. Click **Next** (*Fig. 16*).

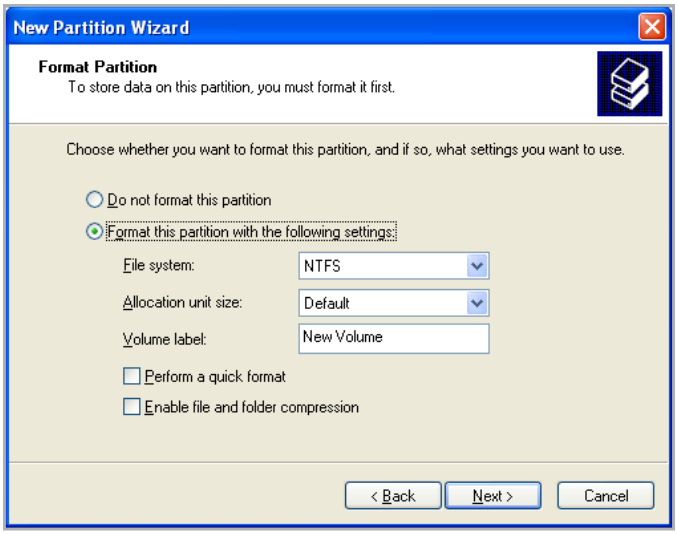

New Partition Wizard
Format Partition
To store data on this partition, you must format it first.
Choose whether you want to format this partition, and if so, what settings you want to use.
Do not format this partition
Format this partition with the following settings:
File system:
NTFS
Allocation unit size:
Default
Volume label:
New Volume
Perform a quick format
Enable file and folder compression
< Back
Next >
Cancel

Fig. 16

14. Click **Finish** to begin the formatting process.
15. Windows Disk Management will format and partition the disk according to your settings (*Fig. 17*), and your drive will appear in **My Computer**, ready to use.

**IMPORTANT INFO:** Please refer to section *3.4.1. File System Formats*, for a more detailed comparison of the various file system formats.

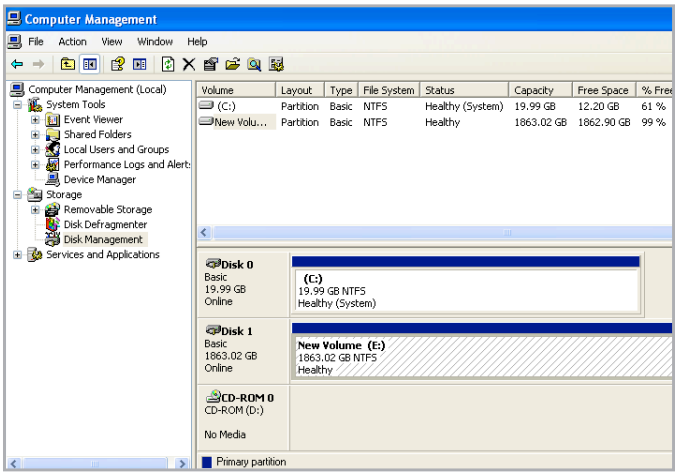



Fig. 17

### 3.4.3. Mac Users

**CAUTION:** Following these steps will erase everything from the 2big, including encrypted data. If you have information that you want to protect or continue to use, back up this information before performing these steps.

1. Connect the drive to the power source and to the computer via the interface port.
2. Select **Utilities** from the **Go** menu in the Finder menu bar.
3. In the Utilities folder, double-click **Disk Utility**.
4. The Disk Utility window will open (*Fig. 18*). Select the volume labeled **LaCie Hard Disk** from the list of available hard disks on the left side of the window.
5. Select the **Partition** tab.
6. From the **Volume Scheme:** menu, choose the number of partitions you want to divide the drive into (Mac OS X gives you the option of dividing the drive into at most 16 partitions). You can adjust the size of each partition using the slide bar between the partitions in the **Volume Scheme:** area.
7. In the **Volume Information** section, enter a name for each volume (partition), choose the volume format.
8. Once you have finalized the volume options, click **Partition**. Click **Partition** again when the alert message appears to continue.
9. Mac Disk Utility will format and partition the disk according to your settings, and your drive will be ready to use.

**IMPORTANT INFO:** Please refer to section *3.4.1. File System Formats*, for a more detailed comparison of the various file system formats.

**IMPORTANT INFO:** Apple recommends that unless you have a specific reason to use the UNIX File System (UFS), you should use the Mac OS Extended format because it provides a more familiar experience to Macintosh users.

**IMPORTANT NOTE:** Formatting will not erase the encryption configuration. If you wish to format a 2big that has been encrypted, you will first need to unlock the device using the LaCie Desktop Manager, then follow the steps below.

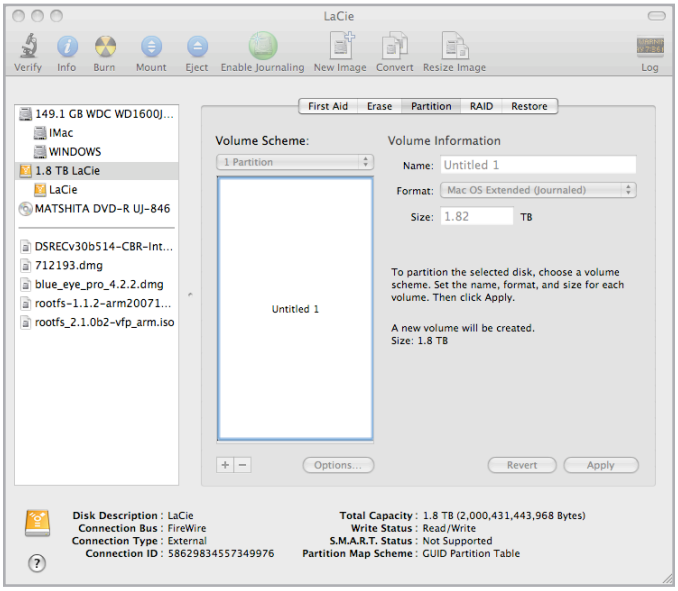



Fig. 18

# 4. Troubleshooting

In the event that your LaCie 2big is not working correctly, please refer to the table on the following page to identify the status of your device. If you have gone through all of the points in the table and your drive is still not working correctly, please see the FAQs that are regularly published on our Web site – www.lacie.com. One of these FAQs may provide an answer to your specific question. You can also visit the drivers pages, where the most recent software updates will be available.

If you need further assistance, please contact your LaCie reseller or LaCie Technical Support (see section *5. Contacting Customer Support* for details).

## Manual Updates

LaCie is constantly striving to give you the most up-to-date, comprehensive user manuals available on the market.

It is our goal to provide you with a friendly, easy-to-use format that will help you quickly install and utilize the many functions of your new device. If your manual does not reflect the configurations of the product that you purchased, please check our Web site for the most current version available.

www.lacie.com

## 4.1. LED Status Indicators

Use the 2big's front and rear LEDs and the chart below as a reference to determine the status of your 2big:

| If the front LED is: | And the rear LED is: | And the RAID mode is: | Then: |
|---|---|---|---|
| Solid blue | Blinking blue | All | The 2big is working properly, only active disks' LEDs blink. |
| Blinking blue | Blinking blue | All | The 2big is starting up; front LED and LEDs of functional disks become solid blue when initialized. |
| Dimming blue (5s)* | Off | All | The 2big is in standby mode. If the power switch is set to "auto" the 2big will enter standby when your computer is either off or in standby. If rebuilding has begun, the process will finish before the 2big can enter standby. After 30 minutes of standby, the LED will switch off. |
| Alternating long blue and short red: | One disk is blinking blue, while the other disk is blinking 3 blue, 1 red: | Safe | RAID is rebuilding. |
| | | Mixed | |
| | Solid red (failed disks) and solid blue (functional disks) | Safe | One drive has failed or was improperly inserted; RAID is functional but the security of the drives has been compromised. |
| | | Mixed | |
| Solid red | Solid red (failed disks) and solid blue (functional disks) | All | One or more drives have failed or are improperly inserted; RAID is not functional. |
| Blinking blue/red | Normal LED activity | All | Temperature alert; allow the 2big to finish current processes and then shut it down. Make sure the ventilation holes on the back of the 2big are not obstructed and that there is ample room for airflow around the unit. Allow the 2big to cool before turning it back on. |
| Dimming red (5s)* | Off | All | During standby mode, when one or more drives have failed or are improperly inserted; RAID is not functional. Dimmed LED stays on for 30 minutes. |
| Dimming red (5s)* | Off | All | Temperature critical; LaCie recommends that following this event you leave the 2big in standby for at least an hour before restarting to prevent damage to the disks. |
| Off | Off | All | The 2big is either turned off, or has been in standby mode for more than 30 minutes, or system or electronic board failure; in this case, contact LaCie customer support. |

* LED dims for 5 seconds and then remains at a low intensity.

## 4.2. Other Troubleshooting Topics

| Problem | Solutions |
|---|---|
| The 2big is not recognized by the computer. | If there is no icon for the 2big on the desktop (Mac users) or in My Computer (Windows users):<br>✦ Check the interface cable connection. Check both ends of the FireWire, eSATA or USB cables and make sure that they are fully seated in their respective ports. Try disconnecting the cables, waiting 10 seconds, and then reconnecting them. If the drive is still not recognized, restart your computer and try again.<br>✦ Make sure your product is not encrypted. If so, you will need to run the LaCie Desktop Manager software.<br>✦ Make sure your computer meets the minimum system requirements for compatibility with the 2big Quadra. See section *1.1. Minimum System Requirements* for more information.<br>✦ Make sure the power supply is properly connected (see section *2.2. Turn On the 2big*), that the drive has been turned on by pressing the On/Off/Auto button the back of the drive, and that the outlet the power supply is connected to is also turned on.<br>✦ Make sure that the drive has been formatted properly. Please see section *3.4. Formatting and Partitioning*. |
| The 2big is working slowly. | If other USB, eSATA or FireWire devices are connected to the same port or hub, disconnect the other devices and see if the 2big's performance improves. |
| The power supply is no longer functional. | Replacement power supply cords are available for purchase on the LaCie Web page:<br>www.lacie.com |

## 4.3. Installing New Firmware

LaCie may periodically offer firmware updates for the 2big. Visit LaCie's Web site, www.lacie.com, for the latest firmware update. For the procedure, please contact LaCie technical support.

# 5. Contacting Customer Support

## Before You Contact Technical Support

1. Read the manuals and review section *4. Troubleshooting*.
2. Try to isolate the problem. If possible, make the drive the only external device on the CPU, and make sure that all of the cables are correctly and firmly attached.

If you have asked yourself all of the pertinent questions in the troubleshooting checklist, and you still can't get your LaCie drive to work properly, contact us at www.lacie.com. Before contacting us, make sure that you are in front of your computer and that you have the following information on hand:

| Information | Where to Find Information |
|---|---|
| 1. LaCie hard drive serial number | Located on a sticker at the back of drive or on the original packaging |
| 3. Macintosh/PC model | **Mac users:** Click on the Apple icon in the menu bar and select **About This Mac**.<br><br>**Windows users:** Right click **My Computer** and select **Properties > General**. |
| 4. Operating system version | |
| 5. Processor speed | |
| 6. Computer memory | |
| 7. The brands and models of other internal and external peripherals installed on your computer | **Mac users:** Click on the Apple icon in the finder bar and select **About This Mac**. Select **More Info...** The Apple System Profiler will launch and will list your internal and external peripherals.<br><br>**Windows users:** Right click **My Computer** and select **Properties > Hardware.** |

## 5.1. LaCie Technical Support Contacts

| | |
|---|---|
| LaCie Asia<br>Contact us at:<br>http://www.lacie.com/asia/contact/ | LaCie Australia<br>Contact us at:<br>http://www.lacie.com/au/contact/ |
| LaCie Belgium<br>Contact us at:<br>http://www.lacie.com/be/contact/ (Français) | LaCie Canada<br>Contact us at:<br>http://www.lacie.com/caen/contact/ (English) |
| LaCie Denmark<br>Contact us at:<br>http://www.lacie.com/dk/contact | LaCie Finland<br>Contact us at:<br>http://www.lacie.com/fi/contact/ |
| LaCie France<br>Contact us at:<br>http://www.lacie.com/fr/contact/ | LaCie Germany<br>Contact us at:<br>http://www.lacie.com/de/contact/ |
| LaCie Italy<br>Contact us at:<br>http://www.lacie.com/it/contact/ | Japan - ELECOM CO. LTD.<br>Contact us at:<br>http://www.lacie.com/jp |
| LaCie Netherlands<br>Contact us at:<br>http://www.lacie.com/nl/contact/ | LaCie Norway<br>Contact us at:<br>http://www.lacie.com/no/contact/ |
| LaCie Spain<br>Contact us at:<br>http://www.lacie.com/es/contact/ | LaCie Sweden<br>Contact us at:<br>http://www.lacie.com/se/contact |
| LaCie Switzerland<br>Contact us at:<br>http://www.lacie.com/chfr/contact/ (Français) | LaCie United Kingdom<br>Contact us at:<br>http://www.lacie.com/uk/contact/ |
| LaCie Ireland<br>Contact us at:<br>http://www.lacie.com/ie/contact/ | LaCie USA<br>Contact us at:<br>http://www.lacie.com/contact/ |
| LaCie International<br>Contact us at:<br>http://www.lacie.com/intl/contact/ | |

# 6. Warranty Information

LaCie warrants your LaCie 2big Enterprise Class against any defect in material and workmanship, under normal use, for the period designated on your warranty certificate. In the event this product is found to be defective within the warranty period, LaCie will, at its option, repair or replace the defective LaCie 2big Enterprise Class.

**NOTE:** For Enterprise Class products, the tower and the disk may have different warranty lengths.

In the event of a drive failure please contact your LaCie reseller or LaCie customer support for drive replacement procedure.

This warranty is void if:

- The LaCie 2big was operated/stored in abnormal use or maintenance conditions;
- The LaCie 2big is repaired, modified or altered, unless such repair, modification or alteration is expressly authorized in writing by LaCie;
- The LaCie 2big was subjected to abuse, neglect, lightning strike, electrical fault, improper packaging or accident;
- The LaCie 2big was installed improperly;
- The serial number of the LaCie 2big or an individual Drive Bay is defaced or missing;
- The broken part is a replacement part such as a pickup tray, etc.
- The tamper seal on the LaCie 2big or an individual Drive Bay casing is broken.
- One or two of the hard disks have been removed and replaced by any hard disk other than a drive provided by LaCie. For drive removal/replacement process, see section *3.3. Removing and Installing Drives*.

LaCie and its suppliers accept no liability for any loss of data during the use of this device, or for any of the problems caused as a result.

LaCie will not, under any circumstances, be liable for direct, special or consequential damages such as, but not limited to, damage or loss of property or equipment, loss of profits or revenues, cost of replacement goods, or expense or inconvenience caused by service interruptions.

Any loss, corruption or destruction of data while using a LaCie drive is the sole responsibility of the user, and under no circumstances will LaCie be held liable for the recovery or restoration of this data.

Under no circumstances will any person be entitled to any sum greater than the purchase price paid for the drive.

To obtain warranty service, call LaCie Technical Support. You will be asked to provide your LaCie product's serial number, and you may be asked to furnish proof of purchase to confirm that the drive is still under warranty.

All systems returned to LaCie must be securely packaged in their original box and shipped with postage prepaid.

**NOTE:** Accessories, such as interface cables, are not under warranty.

**IMPORTANT INFO:** Register your Enterprise Class product at www.lacie.com within 30 days of its purchase date to take advantage of LaCie Enterprise Class Service. For no additional cost, LaCie guarantees that your Enterprise Class product will receive the highest priority from our Technical Support team. Please note that the term of your warranty remains five years.